



# Clinical Presentation

Clinical considerations for care of children and adults with confirmed COVID-19

Updated May 27, 2022

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## What You Need to Know

- The clinical presentation of COVID-19 ranges from asymptomatic to critical illness. Symptoms can vary over time and may progress in severity. Transmission of SARS-CoV-2 can occur before the onset of symptoms.
- Uncommon presentations of COVID-19 can occur, may vary by the age of the patient, and are a challenge to recognize.
- In adults, age is the strongest risk factor for severe COVID-19. The risk of severe COVID-19 increases with increasing age over 40 and with increasing number of certain [underlying medical conditions](#).

## Incubation Period

Data suggest that incubation periods may differ by variant of the virus. The incubation period for COVID-19 is thought to extend to 14 days. Meta-analyses of studies published in 2020 identified a pooled mean incubation period of 6.5 days from exposure to symptom onset.<sup>(1)</sup> A study conducted during high levels of Delta variant transmission reported an incubation period of 4.3 days,<sup>(2)</sup> and studies performed during high levels of Omicron variant transmission reported a median incubation period of 3–4 days.<sup>(3,4)</sup>

## Presentation

The clinical presentation of COVID-19 ranges from asymptomatic to severe illness, and COVID-19 symptoms vary over time. Symptoms can overlap with those of other viral respiratory illnesses. Because symptoms may progress quickly, close follow-up is needed, especially for older people and people with conditions that place them at greater [risk for severe illness](#). People with COVID-19 may be asymptomatic or experience one or more of the following symptoms<sup>(5)</sup>:

- Fever or chills
- Cough
- Shortness of breath or difficulty breathing
- Fatigue
- Myalgia (Muscle or body aches)
- Headache
- New loss of taste or smell
- Sore throat
- Congestion or runny nose
- Nausea or vomiting
- Diarrhea

The [NIH COVID-19 Treatment Guidelines](#) [↗](#) group SARS-CoV-2 infection into five categories based on severity of illness:

- **Asymptomatic or pre-symptomatic infection:** people who test positive for SARS-CoV-2 using a virologic test (i.e., a nucleic acid amplification test [NAAT] or an antigen test) but who have no symptoms that are consistent with COVID-19.
- **Mild illness:** people who may have any of the various signs and symptoms of COVID-19 (e.g., fever, cough, sore throat, malaise, headache, muscle pain, nausea, vomiting, diarrhea, loss of taste and smell) but who do not have shortness of breath, dyspnea, or abnormal chest imaging.
- **Moderate illness:** people who have evidence of lower respiratory disease during clinical assessment or imaging and who have an oxygen saturation (SpO<sub>2</sub>) ≥94% on room air at sea level.
- **Severe illness:** people who have oxygen saturation <94% on room air at sea level, a ratio of arterial partial pressure of oxygen to fraction of inspired oxygen (PaO<sub>2</sub>/FiO<sub>2</sub>) <300 mm Hg, a respiratory rate >30 breaths/min, or lung infiltrates >50%
- **Critical illness:** people who have respiratory failure, septic shock, and/or multiple organ dysfunction

## Asymptomatic and presymptomatic presentation

Studies have documented infection with SARS-CoV-2 in people who never develop symptoms (asymptomatic presentation) and in people who are asymptomatic when tested but then develop symptoms later (presymptomatic presentation).<sup>(6,7)</sup>

However, it is unclear what percentage of people who have asymptomatic infection progress to clinical disease (presymptomatic presentation). People can experience asymptomatic SARS-CoV-2 infection, including [people who are up to date with their vaccines](#) and people who were previously infected.<sup>(8)</sup> Multiple publications have reported cases of people with abnormalities on chest imaging that are consistent with COVID-19 very early in the course of illness, even before the onset of symptoms or a positive COVID-19 test.<sup>(9)</sup>

## Common COVID-19 symptoms

Fever, cough, shortness of breath, fatigue, headache, and myalgia are among the most commonly reported symptoms in people with mild illness.<sup>(5)</sup> Some people with COVID-19 have gastrointestinal symptoms such as nausea, vomiting, or diarrhea, sometimes prior to having fever or lower respiratory tract signs and symptoms.<sup>(10)</sup> Loss of smell and taste are also commonly reported initial symptoms of COVID-19.<sup>(11)</sup>

## Uncommon COVID-19 symptoms

Less common presentations of COVID-19 can occur. Older adults may present with different symptoms than children and younger adults. Some older adults can experience COVID-19 infection accompanied by delirium, falls, reduced mobility or generalized weakness, and glycemic changes.<sup>(12)</sup>

Several studies have reported ocular symptoms associated with COVID-19 infection, including redness, tearing, dry eye or foreign body sensation, discharge or increased secretions, and eye itching or pain.<sup>(13)</sup>

A wide range of dermatologic manifestations have been associated with COVID-19; timing of skin manifestations in relation to other COVID-19 symptoms and signs is variable.<sup>(14)</sup> Some skin manifestations may be associated with increased disease severity.<sup>(15)</sup> Images of cutaneous findings in COVID-19 are available from the [American Academy of Dermatology](#) .

## Transmission

People who have asymptomatic or symptomatic infections can transmit SARS-CoV-2, with varying rates and timelines for transmission.<sup>(16)</sup> Both people who have been vaccinated and those who have not been vaccinated can transmit virus.<sup>(17,18)</sup>

Clinicians should consider encouraging all people to [test for COVID-19 as recommended by CDC, protect themselves and others](#) from infection by getting vaccinated, [wear a well-fitting mask](#) when recommended, and follow [guidance based on community risk](#). Clinicians should also consider advising people who are infected with COVID-19 to follow [CDC guidelines](#) for isolation.



# COVID-19

Key Points

Clinical Progression, Management, and Treatment

› Clinical Presentation

Special Clinical Considerations

Diagnosis

Reinfection

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